

INDEX

- AACP, perm. headquarters 27
 perm. secretary 27
 absorption spectrum 299
 abstracting periodicals 155
 accidental poisonings 39
 acetyl phosphate 135
 active acetyl groups 136
 activation spectrum fluores. 301
 activation energy enzymes 103
 adaptive or induced enz. 233
 advancement index-tannins 105
 advantages-microanalysis 211
 aerated microbial cultures 233
 aerobic, anaerobic respir. 133
 agar 198
 age of pharmacognosy 201
 agroclavine 117
 alceroxylon fraction 203
 alertness to advances 21
 alkaloid extraction 84
 families 107
 synthesis 89
 alkaloidia imperfecta 107
 aloe in commerce 197
 allergens 168
 allergenic plants 50
 Amer. Soc. Pharmacognosy x
 analyt. instruments-ph'cog. 41
 analyt. tech's.-conversions 234
 Andrographia paniculata 207
 anhalonidine 118
 anthocyanin synthesis 115
 antibiotics-plant diseases 226
 lab. exercises 87
 antigen-antibody reactions 87
 antihistamine drugs 45
 anthranilic acid 120
 apothecary gardens 166
 applic. chromatography 247
 microscopy 87
 Aristolochia indica 207
 art and science 13
 artificial fermentation 131
 ascertain. fund avail. 278
 ascertain. research support 279
 Aspidospermum 205
 assay of constituents 84
 attend.-seminars,% new vs old 1
 attenuation of quality 26
 Auxins & plant growth 93
 availability-natural drugs 201
 axial bonds vs equatorial 145
 balsams, tannins, resins 133
 basic references 153
 Belladonna - adulterants 63
 in commerce 197
 beta particles 294
 BiJ reagent 213
 biblical ref.-drug plants 167
 bibliog.-pharmacog. interest 152
 Am. J. Pharm Educ. 154
 bicyclic systems 145
 bile pigment-stain. tissue 271
 biogenetic considerations 114
 biologicals 73
 Biological Abstracts 156
 biosynthesis-cobamides 232
 erythromycin 300
 lipids 135
 morphine 118
 penicillins 232
 processes 41, 84
 radio-medicinals 293
 tetracyclines 232
 blood levels-toxic drugs 216
 boat vs chair form 144
 boron level-deep well water 225
 botany & medicine 90
 boundary lines betw. discip. 4
 Bromothallic acid precip's. 213
 budgets - pharm. libraries 156
 burden of proof 182
 Cannabis cystoliths 65
 capillary analysis 255
 carbohydrates & photosyn. 42
 precursors-alkaloids 124
 carbonyl grps. in polycyclic sys. 144
 casanthranol assay 199

INDEX

- AACP, perm. headquarters 27
 perm. secretary 27
 absorption spectrum 299
 abstracting periodicals 155
 accidental poisonings 39
 acetyl phosphate 135
 active acetyl groups 136
 activation spectrum fluores. 301
 activation energy enzymes 103
 adaptive or induced enz. 233
 advancement index-tannins 105
 advantages-microanalysis 211
 aerated microbial cultures 233
 aerobic, anaerobic respir. 133
 agar 198
 age of pharmacognosy 201
 agroclavine 117
 alceroxylon fraction 203
 alertness to advances 21
 alkaloid extraction 84
 families 107
 synthesis 89
 alkaloidia imperfecta 107
 aloe in commerce 197
 allergens 168
 allergenic plants 50
 Amer. Soc. Pharmacognosy x
 analyt. instruments-ph'cog. 41
 analyt. tech's.-conversions 234
 Andrographia paniculata 207
 anhalonidine 118
 anthocyanin synthesis 115
 antibiotics-plant diseases 226
 lab. exercises 87
 antigen-antibody reactions 87
 antihistamine drugs 45
 anthranilic acid 120
 apothecary gardens 166
 applic. chromatography 247
 microscopy 87
 Aristolochia indica 207
 art and science 13
 artificial fermentation 131
 ascertain. fund avail. 278
 ascertain. research support 279
 Aspidospermum 205
 assay of constituents 84
 attend.-seminars,% new vs old 1
 attenuation of quality 26
 Auxins & plant growth 93
 availability-natural drugs 201
 axial bonds vs equatorial 145
 balsams, tannins, resins 133
 basic references 153
 Belladonna - adulterants 63
 in commerce 197
 beta particles 294
 BiJ reagent 213
 biblical ref.-drug plants 167
 bibliog.-pharmacog. interest 152
 Am. J. Pharm Educ. 154
 bicyclic systems 145
 bile pigment-stain. tissue 271
 biogenetic considerations 114
 biologicals 73
 Biological Abstracts 156
 biosynthesis-cobamides 232
 erythromycin 300
 lipids 135
 morphine 118
 penicillins 232
 processes 41, 84
 radio-medicinals 293
 tetracyclines 232
 blood levels-toxic drugs 216
 boat vs chair form 144
 boron level-deep well water 225
 botany & medicine 90
 boundary lines betw. discip. 4
 Bromothallic acid precip's. 213
 budgets - pharm. libraries 156
 burden of proof 182
 Cannabis cystoliths 65
 capillary analysis 255
 carbohydrates & photosyn. 42
 precursors-alkaloids 124
 carbonyl grps. in polycyclic sys. 144
 casanthranol assay 199

- cascara sagrada in com. 197
 Casearia sylvestris 209
 cell - chem. factory 131
 cellular constituents 83
 Centaurium umbellatum 206
 centrifugal chromatograph 255
 chng' a tchr's methods 179
 char'istics-poison ivy 53
 chelated cations & plnt grth 94
 Chelidonic acid 214
 Chemical Abstracts 156
 analysis in botany 101
 classification 75
 orient. in pharm. 22
 races of species 110
 struc. & ident. 40, 297
 Chlorella 95
 cholestan vs coprostan 143
 cholesterol & glycosides 138
 chromatocab 255
 chromatographic detec. weeds 250
 screening products 253
 sep. of metabolites 254
 chr'tography-volatile oils 255
 on columns 247
 on paper 247
 chromatopile 255
 chromatostrip 247
 chromogenic sprays 249, 252
 cinchona alkaloids 122
 Ciristolochia triangularis 209
 Citric acid 84
 Clevenger apparatus 220
 consultation with donors 279
 completeness-req. for funds 282
 concept-mass in sclerenchyma 260
 counter current solvent
 extraction 252
 copnit list 158
 cooling greenhs's by evap.
 water 227
 comp.-school ref. mater. 153
 communicable diseases 168
 collect. wild drug plants 166
 drugs 190
 commerce-red China 202
 botanical drugs 200
 commun. growing of drugs 165
 commun. inc. from drugs 166
 coca leaves & relig. rites 165
 color reac. vs crystalline
 form opium alkaloids 219
 color tests-atropine, scop'mine 64
 constituents 83
 com'nts ag'st other discip. 5
 controls-plant growth 93
 course credit hours 76
 Coniine & pipecolic acid 124
 cost - radiochemicals 292
 comp. for research funds 282
 cont. sheet electrophoresis 253
 conformational analysis 141
 cont. seminar - tchg meth's 179
 converg. in plant evolution 103
 coord.-prof. areas 12
 conglom. of facts & ideas 29
 concentration determinations 298
 consumption of drug prods 193
 constit. related to taxonomy 42
 creation of US FDA 40
 criminalistics-lab. proced. 214
 criteria of academic success 178
 cross util. of techniques 9
 crown gall tumors - cult. of
 single plant cell 93
 crystallization techniques 41
 cularine 118
 cult. techs for grth.-sterile
 cond. 93
 cup of hemlock 165
 current list-med. lit. 162
 Curtius degradation 148
 cyanogenesis in taxonomy 105, 124
 cytotoxic substrates 233
 daisy-pyrethrum method 257
 defining research 10
 degen. -microbial strains 233
 degree of absorption 299
 allegiance to field 15
 Deianira nervosa 206
 deriv.-Solanaceous drugs 63
 dermatitis prod. plants 50
 design of exams 170
 detection - contaminants 250
 vs isolation methods 249
 separated constituents 248

- Digitalis in comm. 197
- Dioscorea cultivation 200
- directed fermentations 235
- director - pub. relations 279
- disadvan.- microanalysis 211
- discussions, analyt, critical 2
- dissemination information
 - about allergy 45
- diverse interests of
 - pharmacognosists 152
- diversity - lab. tchg. 24
 - among pharm. staffs 25
- dom. roles-taxonomic bot. 101
- drugs & relig. practices 15
- drug constituents 76
 - cultivation 199
 - from the sea 202
 - from angiosperms 20
- drying drug plants 191
- Duboisia 198
- duties on drug imports 195
- econ. important plants 55
- educational backgrounds-
 - Pharmacog. teachers 73
- electron microscope studies 97
- electrophoresis-proteins 248
- elim. of duplication 157
- Elymoclavine 117
- emphasis on dynamic phases 29
 - on original work 157
- encyclopedia collections 29
- enzymatic extracts cont. C¹⁴ 291
- epiandrosterone synthesis 149
- epidermal area determ. 259
- equatorial molec. substit. 145
- equilibration mixtures after
 - mutarotation 147
- equip. in drug production 188
- Ergot in comm. 197
- Esere bean 165
- esprit de corps in pharmacy
 - teaching 25
- estab. time of death 270
- evolution in pharmacognosy 40
- expertness in plant sci. 16
- extent of absorption displacement 299
- extent-constit. exams 108
- extraction - constituents 40
 - procedures 78
- facilities avail. for tchg. 22
 - for serious research 23
- factors govng lab course 81
- faculty enthusiasm 79
- Fed. Soc. of Biol. Sci. 6
- fermentation chemistry 232
- Fern shoot apex vs angiosperm 97
- fertilizers & soil testing 229
- fiber length 259
- field trips - plant garden 65
- filter paper ionophoresis 234
- finances in drug prod. 187
- flame photometry - opium 220
- floods & plant growth 94
- Florigen 95
- fluoride in water 225
- fluorometry 301
- Foreign Commerce Weekly 186
 - language references 154
 - organic matter 250
- forensic investigations 271
- fractional stepwise extrac. 251
- free amino acid taxonomy 106
- frequency rule in distrib. 102
- gamma-radiation sources 294
- garbling 191
- gas chromatography 255
- gen. education vs electives 2
- general constit. in taxonomy 102
- germicidal detergents in
 - nutrient solutions 291
- Gibberellic acid 93, 225
- glandular products 73
- Glinus root 206
- Glycoside extraction 84
- glycolysis 133
- government prog's supporting
 - drug research 200
- growth & differentiation 93
- growth chambers for C¹⁴O₂
 - admin. 293
- Guar gum 203
- guide to young pharmacognosist 153

- hard vs soft water mist
 - propagation 224
- harmful plants 50
- harvesting drugs 190
- Hippocrates 164
- Histological ontogeny 96
- homogeneity of taxa 109
- Hordenine 115
- hormone rooting subs. 224
- hospital pharmacist's abstr's 160
 - pharmacist teaches 14
 - teaching the patient 14
- human physiology 35
- Hydrastis in comm. 197
- hydrolytic prods -glycosides 43
- hydrolysis-starches & sugars 42
- ident. of drug plants 76
 - official crude drugs 30
 - drug plants 167
- idioblastic sandy crystals 264
- immiscible solvent extrac. 252
- immunology 35
- implic. of local politics 15
- importance of organic chem. 77
- importation of extracts 199
 - of pure alkaloids 198
 - of botanical drugs 197
 - of steroids 197
- incising poppy capsules 166
- independent study method 171
- indexing systems 155
- indirect cost allowances 280
- industry & economics 185
- industrial information
 - processing 158
- infrared analysis 141
 - spectrometry-solns, solids 302
- inherent diversification of
 - pharmacognosy 38
- inquiries about cultivating
 - drugs 196
- insecticides, herbicides,
 - rodenticides 21, 41, 45, 168, 226
- interact cpds with radiation 299
- integration of chem mech. 131
- interdisciplinary
 - accomplishment 3, 16
- intermittent mist prop. 222
- international scientific
 - rivalries 155
- inulin as storage prod. 104
- in vitro synthesis 114
- ion exchange separation 247
- Ipecac in comm. 197
- isomers of ethane 144
- Journal of chromatography 252
- 2keto-5 vs 4keto-5 steroids 143
- Khellin 198
- knowledge & understanding 172
 - of commercial market 40
 - remembering, recall 173
- Konigsberger stammbaum 103
- kynureninase reaction 120
- Labiata floral morphology 209
- label warnings on prep's 68
- lab. exams 87
- lab. equip. for radiochemicals 292
 - study of Solanaceous drugs 62
- learning sci. plant names 61
- lecture experience as drama 174
 - notes 61
 - vs discussion 170
 - vs mimeographed pages 174
- leeches on blood of
 - pharmacognosy 27
- length of lecture period 181
- level of teaching 12
 - of student motivation 182
- library training 157
- light activation of acceptor 131
- light energized decomp
 - of H₂O 131
- lignin in plant relations 103
- liquid alkaloids-conium, cicuta 42
- literary ref to drug plants 167
- lit. files industry 160
- logical & orderly sequence 171
- lycopodium method 257
- lysergic acid 120, 148
- macroscop ident, fecal frag 271
- Macronutrients & plant
 - growth 94
- macroscop. plant exams 82
- Mannich-type condensation 120

- manpower in drug prod 186
 marketing drug plants 185,193
 market for pharmacognosists 27
 mass culture-algae, yeast 95
 mechanisms-biosyn. 290
 medicine men-witch doctors 164
 mescaline 115,118
 metabolic pathways-syn. 130
 methoxy rich state 104
 meth's-microbial biochemist 232
 microanalysis-food 270
 plant tissue 276
 microbiological assays 300
 microbial accept.-precursors 235
 transform-alkaloids 234
 transform-steroids 232
 products 38
 microcrystals in belladonna 57
 microdeterm.-carvone 219
 Iodine value 212
 Menthol, Menthone, Piperitone 219
 micro extraction, filtration, crystallization 79
 vs soxhlet 87
 micro melting pt. apparatus 212
 micronutrients & enzyme sys 92,93
 micro precip.-penicillin 212
 microscopic attachments 212
 exam-fecal material 271
 plant exams 82
 techniques 297
 microscopy -powders 83
 microskatology 276
 microsublimation 41, 212
 mimeo bibliographies 162
 moisture content in drugs 41
 molecular constitution, conformation, configuration 142
 motion - bond bending 299
 vibration - spinning 299
 monasteries & drug collect 166
 monopolies in drug trade 195
 Morinda citrifolia 208
 muscle striations-fish vs mammals 273
 mutants of medicinal plants 294
 mycomycin IR data 303
 narcotic control councils 168
 N Y Journal of Commerce 186
 Nicotinic acid 213
 analogs 122
 night temp & growth 94
 non-rigid plastic greenhss 228
 notetaking during lectures 183
 nuclear magnetic resonance 141, 300, 303
 Nucleoprotein metabolism 96
 objectives-lab exercises 81
 pharmaceutical survey 159
 obsolete drugs-information 19, 202
 Galenical preps. 8
 official tests-identity 250
 Offutt's APC capsule 278
 Oil Paint & Drug Reporter 186
 one-carbon condensations 115
 ontogenetic recapitulation 104
 open textbks in lectures 61
 Opium in comm. 197
 Optical isomers, racemic mixtures & IR spectra 302
 optical rotary disper. anal 141
 organizing the lab 85
 overhead chgs & grants 280
 oxalate index 263
 PMA 284
 palisade number 264
 Papaver somniferum 1 & 3 205
 partition & adsorption 248
 patents & rsch. support 280
 path-carbon in photosyn. 91
 paucity-nat.drug investi. 20
 peat cubes, pots-start plnts 230
 Pectic enzymes 93
 pedestrian teaching 26
 pentose shunt 133

- petroleum oil insecticides,
 herbicides 94
 pharmaceutical abstracting-
 indexing service 157, 158
 pharmacist & cultural org. 167
 pharmacy librarian 156
 pharmacognosy boundary lines 161
 is sick 74
 taught in other areas 21
 textbooks 75
 pharmacology vs poisons &
 doses 18
 phenol formation 133
 Phloroglucinol 211
 photosyn in vitro 151
 3phosphoglyceric acid 134
 photomicrography 212
 pilot plant chromatographic
 separations 252
 phylogenetic classif. 103
 phylogeny, taxonomy &
 constituents 40
 phys. chem. properties &
 conformation 147
 phytochem. investigations 251
 planning lab manual 86
 plant chemotherapy 96
 plant feedings with radio-
 active nutrients 291
 plant growth 189
 Science Seminar 111
 serology 102
 virus diseases 96
 plot-wavelength vs radiation
 absorbed 299
 polarography 298, 299
 Podophyllum in comm 197
 poison centers 168
 ivy 52
 poisonous plants 50
 polarizing microscope 79
 pollen grain numbers 259
 polycyclic systems 146
 Polygala senega 206
 Potassium precip. agents 213
 prediction on constit. 109
 prep.-microscope slides 275
 prescription specialties 43, 70
 preservation -drugs 191
 primary purpose-seminars 1
 primary sources in study 172
 principles-cell. syn 30
 problem oriented teaching 172
 solving 170, 171
 procedures - growing drugs 185
 prod. inform with drug grps 44
 produc., comm.-raw materials 39
 Cascara sagrada 203
 castor oil 202
 progress-medical science 75
 proof-chem structure 41
 identity Cannabis 65
 prolamines in Gramineae 102
 propagation-out-dated inform. 159
 proprietary items 43
 protopine in Papaveraceae 107
 psilocybin 106
 ptelea spp 208
 public health advisors 168
 culture collections 232
 publicity on drug rsch. 200
 quadrigen-antigens 44
 quantitation bef. isolation 297
 quantitative eval.-drugs 251
 quassin in denatured alcohol 198
 quenchers of fluorescence 301
 quenching vibrations 299
 radioactivity counters 291
 radioactive colchicine,
 nicotine, morphine 91
 radioautograph-chromatogram 249
 radiochemical purity 292
 radiosensitivity-plants 293
 raw vs extracted drugs 198
 Rauwolfia 89, 206
 R. caffra 206
 R. ramtona 209
 R. sellowii 206
 reactions-photosyn 131
 respiration 131
 realistic askings for rsch 281
 receptor site-cell surface 151
 recognition of poisonous
 plants 39
 recovery of compounds after
 instrumentation 298

- recruitment-grad. students 26
- redefinition of a science 6
 - of pharmacognosy 8
- Red squill & strychnine 45
- reference chromatograms 250
 - serv. to pharm lib. 156
- refractive index 79
- relation - carboh. to fat
 - metab. 135
 - cell prod to metab 130
- reliability in preps. 199
- renewed interest in botanical drugs 200
- requests for rsch support 281
- requirements for implementing Seminar recommendations 4
- research center 23
 - director 279
 - in natural drugs 194
- reserpine synthesis 149
- reserve carbohydrates 104
- responsibility of pharmacist to commun. 167
- resubmission of requests 282
- resuspended cells in cult. 234
- retail pharmacist- "drug specialist" 43
- review journals 157
- revision-course content 74
- Rf vlaues- sep. constit. 248
- rhizotomists 164
- ricinin 115
- rigid plastic green hss. 228
- rodenticides 168
- rotenone & pyrethrins 45
- Rubus idaeus 206
- rule-metab. intermed. 126
- rutin 198
- sales of reserpine 197
- sand & peat vs soil 229
- saponins in photography 198
- sassy bark 165
- satawar 207
- schedule for using aspidium oleoresin 69
- Schinopsis balansae 209
- Schlesinger's solution 68
- scholarly presentation 10
- Scleriedes 259
- screening botanical drugs 200
 - research proposals 280
- secondary prods-cultures 233
- seed carboh.-Gramineae 104
 - germination problems 225
- segregation after hybridization 294
- self aggrandisement thru publications 27
- selective solvent extrac. 251
- selling pharm schls to grantors 284
- Senega in comm. 197
- Senna in comm. 197
- sep. fact from fancy 13
- septic cond. of growth 291
- sequence in lab 86
- serology 35
- Shikimic acid 117
- smog & plant growth 94
- solubility & partition characteristics 253
- Solanaceous morphology 54, 55
- sound educational object. 29
- source-beta radiation 293
 - plant drugs 185, 186
- Solidago species 209
- special libraries ass'n 158
 - points for students 66
- species-chem structure 11
- spectrometry 298
- stability of epimers 147
- stachydrine 117
- standardization-microscope 78
- standards-qualification 26
- static cult. microorg. 233
- statistical analysis 35
- starch grain diameter 262
 - index 262
 - of tetraploid plant 206
- starch from maize, potato 84
- state of diges. of food 270
- steric hindrance 145
- steroids from Dioscorea 198

- sterols in plants 138
- stomach contents 273
- stomatal index & gland index 262
 - numbers, indices 261
- storage of drugs 191
- strain specificities to
 - substrates 233
- stress on qualitat. ident 8
- strengthening faculties 23
- structure-activity relation-
 - ships 19
- student abil. vs accomp. 184
 - collaboration 86
 - particip. in discussion 175
- study sheets 78
- survey of pharmacognosy 34
- systems-circulating jnls. 162
- Tables of Contents Jnl. 162
- taxa based on accum. prod. 109
- taxes on drug imports 195
- taxonomy of objectives 170, 172
 - avge. fat iodine no. 108
 - avge. mol. wt. 108
 - tannins 105
 - tartaric acid 105
- teaching aids 65
 - in depth 22
 - from broad base 15
 - vs research 178
 - vs selling 1
 - without suitable backgrnd 11
- teacher motivation 170, 176
- tendencies in quant. micro-
 - scopy 265
- terminal course biology 35
- terpenes 136
- textbook evaluations 24
 - on biological prods 24
- therapeut. active compds 297
- thermal neutrons 294
- thiochrome 301
- Thymus spp. 207
- time clock-food sequence 275
 - spent-specific drugs 20
- timing-grant requests 282
 - prereq. in a curriculum 36
- tissue culture growth 291
- tissue homogenates 292
- toxicol. with nat. drugs 62, 79
- training - pharmacognosy
 - teacher 25
- transition to new pharmacog. 18
- translocation 95
- transmethylation 292
- transmission-knowledge 164
- trial by ordeal 165
- tricarboxylic acid cycle 132
- trichocereine 115
- trichome rib length 259
- trigonelline 117
- Tschirch - Handbuch 154
- turnover of organic medicinals 8
- types of allergens 45
- ubiquitous sterols 137
- ultraviolet spectrum anal. 141
- understanding biosyn. rel'nshps 30
 - comprehensive application 173
- uniqueness in pharm curric. 6
- unlisted drugs 158
- urea form fertilizer 230
- USDA drug exploration 11
- use -crude drugs by primitive
 - man 164
- Valerian spp 205
- validity in testing 177
 - data on normally grown
 - plants 291
- value-seminars to Deans 4
- Van der Waals radius 144
- various forms of radiation 294
- variety uses radio isotopes 92
- vein islet numbers 261
- veinlet termination number 263
- visual aids in teaching 182
 - detection of adulterants 40
- volume of sci publication 155
- Warburg respirometer 87
- wild vs cultivated drug plants 185
- working closely with
 - people 14
- xray diffraction analysis 141
- xray spectroscopy 300